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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,428	11/22/2000	Gerhard Pfaffinger	HAS-009.01	2876

25181 7590 04/08/2005

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EXAMINER
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GRIER, LAURA A

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/721,428

**Applicant(s)**

PFAFFINGER ET AL.

**Examiner**

Laura A Grier

**Art Unit**

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/22/00.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 3-4, recites "... signal processing device connected before two of the four loudspeakers,..". The claim language makes the interpretation of how and/or where the signal processing device is connected to the speakers.

Claims 2-8 are dependent on claim 1.

Claim 9, line 2, recites "... signal processing device connected before the other the other two loudspeakers,..". The claim language makes the interpretation of how and/or where the signal processing device is connected to the speakers.

Claim 10, lines 4-5, recites "... signal processing device connected before a respective pair of the loudspeakers,..". The claim language makes the interpretation of how and/or where the signal processing device is connected to the speakers.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Date et al., U. S. Patent No. 5325435 (herein, Date) in view of Derogis et al., U. S. Patent No. 5793876.

Regarding claims 1, 10 and 11, Date discloses a sound field offset device. Date's disclosure comprises loudspeakers (figure 2 and 3), which reads on four loudspeakers digital filter(s), which read on a least one signal processing device, wherein loudspeakers 13 and 14, respectively represent a pair; the digital filter(s) receives a left and right signal respectively and indicates being controlled by two input signals and produces signals to control the loudspeakers; the inputs signals are weighted differently as evident by the digital filtering of the signals for processing sound reflections and cross talk, wherein the outputs of the digital filters are added by an adder (9) to provide loudspeaker outputs in phase in respect to directivity of the acoustic output signal (col. 20-41 and 55-67 – col. 4, lines 1-50). However, Date fails to specifically disclose weighting based on the amplitude and phase.

Regarding weighting input signals for a loudspeaker output in respect to amplitude and phase, in a similar field of endeavor, Derogis et al. (herein, Derogis) discloses improving the directivity of loudspeaker output by weighting amplitude and phase of input signals (col. 2, lines 10-34, 67-col. 3, lines 1-17).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made of modify the invention of Date by implementing weighting the amplitude and phase

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of inputs signals for the purpose of improving the acoustic radiation or directive pattern of loudspeaker outputs enhancing the acoustics of a listening environment.

5. Claims 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 2-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

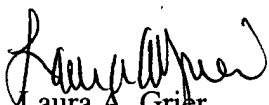
Ishida, U. S. Patent No. 5109415 disclose audio signal processing system performing balance control in both amplitude and phase of audio signal.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (571) 272-7518. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Laura A. Grier  
April 4, 2005